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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,139	03/06/2002	William D. Tandy	4333.1US (99-0257.1)	9714
24247	7590	03/25/2005	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			CHANG, VICTOR S	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,139

Applicant(s)

TANDY ET AL.

Examiner

Victor S Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,8,9,11,12,14,16,17,19,20,22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,8,9,11,12,14,16,17,19,20,22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/8/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' drawing replacement sheets, amendments and remarks filed on 12/20/2004. Applicants' amendments to the specification [0041], Figs. 3 and 5, claims 1, 4, 6, 9 and 17, and cancellation of claims 7, 15 and 23 have been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn. In particular, upon reconsideration, Applicants' argument "The Weng et al. reference contains no description ... as to how an excimer laser affects the adhesive" (Remarks, page 13, bottom paragraph) is persuasive. As such, the rejection over Weng alone is withdrawn. However, an additional search is required, and it yielded a new reference. Applicant's comments regarding Weng alone are moot in view of the new grounds of rejection.

Drawings

4. It is noted that newly amended Fig. 3 corrects the location of the "front surface" 1A of the marking tape. The location of 1A is relocated from the outer surface of the flexible film to an adhesive layer surface which is directly adhered to the backside surface of a semiconductor wafer. Support is found in paragraph [0033].

Claim Objections

5. Claim 4 is objected to because of the following informalities:

In claim 4, line 2, please delete the word "the" after the phrase "permanently attached layer". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner notes that in each of the independent claims 1, 9 and 17, the recitation "a second adhesive layer disposed between the tape and the first outermost adhesive layer performs at least one of curing onto portions of the first outermost adhesive layer and losing adhesive properties for facilitating peeling of the flexible film from at least a portion of surface of a semiconductor device." appears to be vague, indefinite and confusing. More particularly, both the newly amended Fig. 3 and paragraph [0033] disclose that structurally when the composite tape is adhered a wafer (semiconductor device), the flexible film layer is not in contact with the wafer, as such, it is unclear to the Examiner that how the flexible film can be peeled from at least a portion of a surface of a semiconductor device? Clarification is requested.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weng et al. (US 5972234) in view of Robertson (US 5855969).

First, the Examiner notes the relied upon teachings of Weng as follows: Weng's invention is directed to a laser mark tape for marking a wafer (semiconductor device). In one embodiment, Weng teaches a marking tape for making an identification mark by a high-intensity energy beam (column 2, lines 20-21), such as a laser (column 1, line 32). Weng also teaches that any suitable tape of polymeric based material, which can be easily patterned by high-intensity energy beams such as ultraviolet light or laser, can be used (column 4, lines 27-33). The marking tape adheres to a substrate to be marked (column 2, line 64). A release layer, such as a polypropylene or PET film, may be provided to cover the adhesive layer for protection during the laser marking process (column 4, line 64 to column 5, line 2).

For claims 1 and 4, Weng lacks teachings that the marking tapes comprises two curable adhesive layers which forms a permanently attached layer to a portion of the surface of a bare semiconductor device. However, it is noted that each of the first outermost adhesive layer and the second adhesive layer is merely recited as electromagnetic radiation-curable; and newly amended Fig. 5 also expressly shows that

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the two layers are of the same material 1B. As such, the Examiner notes that in the absence of any distinction between the radiation-curable components of the first and second adhesive layers, Weng's polymeric material based marking tape reads on both the first and second adhesive layers of the instantly claimed invention, and the recitation of comprising two separate uncured adhesive layers appears to be arbitrary or imaginary layers within a single layer. In other words, they are equivalent to one single, at most thicker, adhesive layer. Further, the Examiner notes that Weng's single layer of curable marking tape layer also inherently reads on the recitation "the second layer ... curing onto ... the first ... adhesive layer". As to the properties of the adhesive layers (i.e., being curable and forming a permanently attached layer), it is noted that Weng does teach that any suitable tape of polymeric based material, which can be easily patterned by high-intensity energy beams such as ultraviolet light or laser, can be used, as set forth above. Additionally, it is noted that Robertson's invention is directed to a method for marking metal or other product for its identification (Abstract). Robertson teaches that a layer of coating containing an additive that is darkenable under a laser beam is cured to form a product identification indicia (Abstract; column 6, lines 26-32). The identification system can withstand the rigors of primary metal mills (i.e., permanent) (column 2, lines 19-21). As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to substitute Weng's laser marking layer with a layer of Robertson's laser curable and darkenable coating, motivated by the desire to obtain a permanent product identification marking. It should be noted that the selection and substitution of a known equivalent material based on its

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suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07. Finally, regarding the recitation "losing adhesive properties for facilitating peeling of the flexible film", the Examiner notes that Weng expressly teaches that a release layer, such as a polypropylene or PET film, may be provided for protection during the laser marking process, as set forth above. In other words, the peeling property is anticipated by Weng's release layer.

For claim 3, the Examiner notes that since the surface of the semiconductor is not a structural element of instantly claimed laser-markable tape, whether the surface of the semiconductor bears grinding marks or not is patentably irrelevant.

For claim 6, Weng expressly teaches that the identification mark is used to identify different lots of semiconductor substrates (column 1, lines 22-24). The marking may be a numerical marking, an alphanumerical marking or any other markings (column 4, lines 52-56). As such, in the absence of evidence to the contrary, it is the Examiner's position that Weng implicitly teaches that the markable surface of the marking tape is uniformly (i.e., homogeneously) disposed over the wafer surface, so as to form a uniform marking over the wafer surface.

For claim 8, Weng's release layer, such as a polypropylene film, reads on the instantly claimed flexible film material. Further, the Examiner notes that the statement "it is common knowledge that polypropylene film is inherently translucent" in the prior Office action (dated 10/19/2004, page 5) is taken to be admitted prior art because Applicant failed to traverse the Examiner's assertion.

For claims 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24, it is noted that these claims are within the same scope and have the same claimed limitations as claims 1, 3, 4, 6 and 8. As such, they are also rejected for the reasons as set forth above.

Response to Argument

9. With respect to Applicants' argument "Weng et al. reference, at best, describes a tape having one single adhesive layer, not a tape having multilayer adhesive.

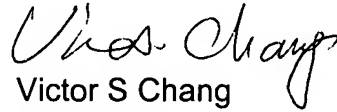
Therefore, the Weng et al. reference cannot and does not anticipate ... the presently amended independent claims 1, 9, and 17" (Remarks, page 13, first full paragraph), the Examiner repeats that in the absence of any distinction between the radiation-curable components of the first and second adhesive layers, Weng's polymeric material based marking tape reads on both the first and second adhesive layers of the instantly claimed invention, and the recitation of comprising two separate uncured adhesive layers appears to be arbitrary or imaginary layers within a single layer. In other words, they are equivalent to one single, at most thicker, adhesive layer, as set forth above.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Victor S Chang
Examiner
Art Unit 1771

3/17/2005